First Hit Fwd Refs

Generate Collection Print

L2: Entry 1 of 6 File: USPT Feb 10, 2004

DOCUMENT-IDENTIFIER: US 6691106 B1
TITLE: Profile driven instant web portal

Detailed Description Text (17):
The instant Web portal uses the information regarding the user 100, stored and categorized within the user profile 140, and the search entry 120, made by the user, to create a plurality of search queries 160 by using a query generator 150. The keyword(s) entered as the search entry 120 are matched against the topics dictionary 130 to determine the category (or categories) of interest to which the search entry 120 may relate within the topic categories within the user profile 140. For each topic category that matches the search entry 120, as determined by the topics dictionary 130, the information associated with each topic category is sent to the query generator 150 to construct specific queries to search engines 170 for locating relevant Web sites. The information may also determine which Web sites and search engines are to be utilized for performing the search.

Detailed Description Text (18):
Because a Web query 160 typically consists of a collection of disjoint words or a sentence, the query generator 150 is preferably adapted to build query grammar that relies on each particular search engine's ability to interpret individual words as well as groups of words (such as a sentence). The query generator 150 is preferably adapted to construct appropriate customized queries 160 based on the particular search entry 120 made by the user. The query generator 150, for example, may be adapted to generate valid search queries 160 using the Webcrawler search engine. The Webcrawler search engine performs semantic interpretation of individual words as well as groups of words to perform the search. However, any suitable search engine (such as Yahoo!, Altavista, Excite, etc.) may be utilized to receive search queries 160 formatted for each particular search engine to perform the search.

Detailed Description Text (19):
Utilizing the available information (such as that in the user profile 140) to assist the query generator 150 in constructing the queries 160 will be at least as useful as the search entry 120 itself to construct the queries 160. The results obtained from the search engines 170 may be further filtered using the information within the user profile 140 to ensure relevance to the search entry 120. The results could also be translated to different formats for appropriate output to specific devices. Finally, the filtered results (the Web site address URL links) may be reported 190, and the results may be categorized by data type, location, source, and even by category.

Detailed Description Text (21):
For example, the user may type in "Porsche Boxster" as the search entry 120. The search entry 120 will be transmitted to the topics dictionary 130, where the words "Porsche" and "Boxster" are matched to relevant topic categories within the user profile 140, such as "Automobile", "Sports Car", or any other relevant topic category that may have been generated by the relevance engine 110 based on the information regarding the user 100. The information sorted and categorized within the user profile 140 used by the query generator 150 to construct the queries 160 may include details such as: (1) where the user lives (so as to determine the closest Porsche dealership and provide the dealer's Web home page); (2) the user's

income level (so as to determined any financial services the user may use for the purchase of an automobile); and (3) other automobile(s) the user may own (so as to determine, for example, a user's color preferences, or other preferred options for automobiles).

Detailed Description Text (22):
Once all the available information is collected, the query generator 150 constructs a plurality of queries 160 based on the relevant information, and the queries are properly formatted for each Web site for which the query 160 is intended, and in particular, search engines 170. An example of such a report that may be generated is as follows in Example 1:

Detailed Description Text (24):
Additionally, the instant Web portal may be designed so that instead of manually typing in a search entry 120 in a text box, for example, the user can highlight a word or phrase/topic on the Web page that the user is browsing so that the highlighted word or phrase/topic becomes the search entry 120 for conducting a search for relevant Web pages. Furthermore, the instant Web portal may utilize information about the user's current context, such as the user's activity history in the immediate past, the user's current goals (search goals), as well as the current Web page. This additional information may help provide for additional keywords that may assist the query generator 150 in constructing additional queries 160, or further refine the search. For example, if the user had already visited a Web page in the last few minutes and there are no updates, that page will not be included on the results page and will be filtered out.

Detailed Description Text (28):
Using the instant Web portal, the information presented is personalized to the user's current profile 140 and the context of the user's browsing activities, thus resulting in more relevant information than what can be gleaned from a portal site on the topic. Additionally, all relevant links are available on a single page, thus serving to reduce the interaction costs incurred when the user visits each individual site to extract the same information.

CLAIMS:

28. A search system for obtaining interested Web pages on an Internet, comprising: a user profile including information regarding a user, wherein the information regarding the user is associated with relevant topic categories within the user profile, and the information regarding the user is automatically collected by a computer system, without input from the user, from a plurality of distinct application programs installed on the computer system; a software program executing on the computer system, the program having instructions, to determine a plurality of distinct applications installed on the computer system, to automatically collect, without input from a user, information regarding the user from the plurality of distinct application programs installed on the computer system, to create a user Profile based on the information collected, to generate a plurality of topic categories in the user profile using a relevance engine, to parse a web page using the relevance engine to generate a keyword representing a topic of the web page, to receive a search entry from the user to search for data related to the search entry on the Internet, a query generator to generate a plurality of queries based on a search entry from the user and the plurality of topic categories to search for data related to the search entry on the Internet; and at least one search engine to search the Internet for interested Web page addresses using the plurality of queries generated based on the search entry and the user profile.

Collections

Definition, Editing, Browsing

Name: Undefined

Contents:

6691106
6430531

Comment:

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Save | Save As | Reset | Quit

Print | Search | Get Images | Classification Info

Collection Directory

L19: Entry 3 of 22 File: USPT Oct 28, 2003

DOCUMENT-IDENTIFIER: US 6640244 B1
TITLE: Request batcher in a transaction services patterns environment

Drawing Description Text (156):
FIG. 154 illustrates a user manger/user context relationship diagram;

Detailed Description Text (286):
XML documents consist of two parts. The first is the document itself, which contains XML tags for identifying data elements and resembles an hTML document. The second part is a DTD that defines the document structure by explaining what the tags mean and how they should be interpreted. In order to view XML documents, Web browsers and search engines will need special XML processors called "parsers." Currently, Microsoft's Internet Explorer 4.0 contains two XML parsers: a high-performance parser written in C++ and another one written in Java.

Detailed Description Text (356):
Is the Intention to Create Production Reports or Facilitate End User Queries?

Detailed Description Text (357):
Ease of use will be of major importance for end user query and decision support type applications. In contrast, functionality that allows for the implementation of complex reporting requirements will outweigh ease of use for applications whose objective is creating production reports.

Detailed Description Text (446):
Therefore, most document management products provide index services that support the following methods for searching document repositories: Attribute Search--scans short lists (attributes) of important words that are associated with a document and returns documents that match the search criteria. For example, a user may query for documents written by a specific author or created on a particular date. Attribute search brings the capabilities of the SQL-oriented database approach to finding documents by storing in a database the values of specially identified fields within a document and a reference to the actual document itself. In order to support Attribute Search an index maintains documents' attributes, which it uses to manage, find and catalog documents. This is the least complicated approach of the searching methods. Full-text Search--searches repository contents for exact words or phrases and returns documents that match the search criteria. In order to facilitate Full-text Search, full-text indexes are constructed by scanning documents once and recording in an index file which words occur in which documents. Leading document management systems have full-text services built-in, which can be integrated directly into applications. Context Search--searches repository contents for exact words or phrases. Also, searches for related words or phrases by using synonyms and word taxonomies. For example, if the user searches for auto, the search engine should look for car, automobile, motor vehicle, etc.

Detailed Description Text (2148):
Many UIs allow users to query databases for lists of data. In FIG. 96, for example, the user clicks the "Get Customers" button to initiate a database query. The query will retrieve every customer from the database and the UI will display the customers in a list box. The user can then scroll through the data and select a

particular entry for further investigation.

Detailed Description Text (2170):
When the Server has retrieved all of the data meeting the search criteria, the Server builds the last "page." When the last page is returned to the client, the "last found key" is left blank. This notifies the client the search is complete and no more data matching the search exists on the Server. Note that the last page is usually smaller than the other pages.

Detailed Description Text (2172):
When no data are selected from the search criteria, the server builds an empty page signaling to the client no more data exist on the server.

Detailed Description Text (2556):
User Context

Detailed Description Text (2557):
FIG. 152 illustrates a flowchart for a method 15200 for maintaining a security profile throughout nested service invocations on distributed components. In operation 15202, interconnections are provided between distributed components each having nested service invocations. A user is identified in operation 15204. The user is associated with roles in operation 15206. In operation 15208, a user context instance is created upon successful identification of the user. The user context instance also includes information about the user including the roles. A request is received from the user to invoke a service on a component in operation 15210. The component invokes an additional service of another component. The user context is queried for the information about the user in operation 15212. The user information is compared with an access control list for verifying that the user has access to the component in operation 15214. The user information is also compared with an access control list for verifying that the user has access to the additional service of the other component in operation 15216.

Detailed Description Text (2558):
Optionally, all user interactions may be logged as well. As another option, a user interface may be modified to provide access to actions that can be performed by the user based on an identity of the user and the roles associated with the user. The user context instance may also be passed along as a parameter of service invocations. Additionally, the service invoked may associate any objects created, updated, or deleted with the user context instance. As a further option, the user context instance may also encapsulate security certificates of the user.

Detailed Description Text (2564):
Therefore, represent information about a user in a shared User Context object. This object maintains a user's unique identification that can be subsequently checked against a resource's access control list (ACL). A User Context instance is created upon a user's successful, validated identification to the system (usually through some "login" mechanism). After that, the system user interface can modify itself to provide only the actions that can be performed by that particular user acting in a particular role. Controls may query the User Context and modify their own visual state as needed (enable/disable, hide/show).

Detailed Description Text (2565):
The User Context can also be passed along as a parameter of service invocations. All public, stateless services on a component should provide for a User Context to be passed along as a parameter. The service being invoked can then associate any Business Objects created, updated, or deleted as a result of the service invocation with the User Context.

Detailed Description Text (2566):
One example of this would be a User Manager 15400 associating a User Context

instance 15402 with the Business Objects 15404 they are affecting. FIG. 154 illustrates a user manger/user context relationship diagram.

Detailed Description Text (2568):
Benefits Common User Representation. One single representation of a user and their access rights can be shared across all areas of the system. Extensible Security. Because there is one source for the User Context various policies or strategies could be used to identity and authenticate the User within a context. For

L19: Entry 19 of 22 File: USPT Feb 19, 2002

DOCUMENT-IDENTIFIER: US 6349307 B1
TITLE: Cooperative topical servers with automatic prefiltering and routing

Abstract Text (1):
An information organization and retrieval system that efficiently organizes documents for rapid and efficient search and retrieval based upon topical content is presented. The information organization and retrieval system is optimized for the organization and retrieval of only those documents that are relevant to a given set of predefined topics. If a document does not have a topic that is included in the given set of topics, the document is excluded from the provided service. In like manner, if a document includes a topic that is specifically banned from the provided service, it is excluded. In this paradigm, the provider purposely limits the scope of the provided search and retrieval services, but in so doing provides a more efficient and effective service that is targeted to an expected user demand. The information organization and retrieval system also supports context-sensitive search and retrieval techniques, including the use of predefined or user-defined views for augmenting the search criteria, as well as the use of user specific vocabularies. In a preferred embodiment, the select set of topics are organized in multiple overlapping hierarchies, and a distributed software architecture is used to support the topic-based information organization, routing, and retrieval services. Documents may be relevant to one or more topics, and will be associated with each topic via the topical hierarchies that are maintained by the information servers.

Brief Summary Text (6):
Conventional search engines, such as those used for finding documents on the World Wide Web, use a variety of techniques to quickly locate documents in response to a user query. One such technique is the creation of a database of indexes corresponding to the documents on the web. A user's request is processed by finding a correlation between the user's request and the information contained in the index database, rather than by actually searching the web in response to each user request. Conventional search engines use "crawlers" that locate new or updated documents. When a new or updated document is located, the search engine creates an index corresponding to that document that contains, for example, a list of the most commonly occurring words or phrases in the document. Alternatively, techniques are available that allow the creator of the document to augment the document with a set of keywords or phrases directly, and these keywords or phrases are used to index the document. For ease of reference, the term keyword is used hereinafter to mean a word that is contained in an index to a document, regardless of the methods used to place that word in the index. When a user enters a query, the search results are based upon a matching between the words contained in the user query and the keywords contained in the indexes to the documents. As would be evident to one of ordinary skill in the art, the size of an index to a document can be large, and a database of indexes to virtually all of the documents on the web will be extremely large and will continue to grow at an increasing rate of growth. In 1998, an estimated 1.5 million pages are added to the World-Wide-Web per day, and this daily rate is expected to continue to increase. In addition to the cost of increased storage resources, the performance of database search techniques degrade as the size of the database increases.

Brief Summary Text (7):
Document retrieval based upon a keyword search is becoming increasingly less efficient and less effective as the number of documents that may contain the keyword continues to increase. It is not uncommon for a keyword search on the World Wide Web to return thousands of documents that are related to the keyword, many of which are irrelevant to the user's quest. To reduce the number of identified documents corresponding to the keyword search, a user must augment the search parameters with additional keywords or phrases. In so doing, however, documents that are relevant to the user's quest may be excluded from the search results if the user does not choose the same words that are used in the document. A search engine could be enhanced to automatically augment a user's query with synonymous keywords to avoid this problem, but such an augmentation will aggravate the problem of identifying documents that contain the words but are irrelevant to the user's quest.

Brief Summary Text (9):
The techniques used to organize, store, and retrieve documents based on keyword searches, however, are not necessarily optimal or desirable for documents that can be categorized by topic. A mere replacement of topic phrases for keywords in a keyword search engine may not provide the improvements in search and storage efficiencies required as the quantity of available information continues to increase. The traditional approach of creating larger and larger search engines and databases that index every available document on the web based upon a frequency of occurrences of words or phrases within each document may be wholly inefficient and ineffective for organizing and retrieving documents based on topic. An indiscriminate use of topic determining techniques, for example, may merely create an even larger vocabulary that a user must use to filter relevant documents, with the inherent risk of choosing a different set of words or phrases than those used to index the documents. Because most documents contain multiple topics, the addition of topic information to existing indexes of documents will also substantially increase the size of the database required to contain this additional information.

Brief Summary Text (13):
In a preferred embodiment, the retrieval process is enhanced by providing a method and apparatus that supports the use of predefined or user-defined views for augmenting the search criteria based upon the context within which the user is searching.

Detailed Description Text (5):
Consistent with traditional search engines, the topical server 110 periodically sends crawlers to the document sources 116, 117 to gather new or updated documents. The server 110 scans the documents found by its crawlers and determines the topics contained in each document. In contrast to the traditional search engines, the server 100 selects the document for identification only if one or more of the document topics are included in the federation topics. As discussed below, the topics may be determined by automated means, using for example semantic processing, heuristics, knowledge based systems, machine learning, and the like. The topics may also be determined based upon information that is ancillary to the document. For example, video `documents` may have an associated abstract, audio `documents` may be stored in the document source 116, 117 according to style or artist, and so on. In like manner, the results of a manual topic determination could be stored with the document, and used by the topical server 110 to determine the topic of the document for use in this system 100. As would be evident to one of ordinary skill in the art, and as discussed below, because the topics of potential interest are predefined, the ability to determine whether a document is relevant to each topic is greatly enhanced, as compared to a blind search for all possible topics that the document might address. The server 110 communicates an identifier corresponding to the document, and the document topics, to any other server 120, 130, 140 in the federation that includes one or more of the document topics. As would be evident to

one of ordinary skill in the art, the storage of a document identifier associated with each topic of a predetermined set of federation topics can be expected to consume significantly fewer resources than the storage of the aforementioned general index of keywords and the like for the document in a traditional search engine.

Detailed Description Text (15):
FIG. 3 also illustrates an example flow for document search and retrieval. A user interacts with the system via a client device 305. User queries are processed by the query/result-services module 390 to determine a search topic. As with the document section and categorization 320 process, the term-mapping-services module 340 facilitates the query process by transforming and augmenting the user query with the terminology used within the information processing system. Because of the use of predefined topics, the query/result-services module 390 in a preferred embodiment is able to optimize the determination of the search topic by formulating the query consistent with the federation topics and topic hierarchy.

Detailed Description Text (16):
The use of predefined topics and topic hierarchies provides other advantages that cannot be realized in a traditional keyword based search engine. In a preferred embodiment, for example, the user can be guided in the formulation of the query by having the system present a view of the progression of the query along the hierarchy of topics. Using FIG. 2 as an example, a user is provided a graphic presentation of the tree 210 when the user selects "art" as a query; thereafter, the user progresses through the tree 210 using a keyboard, mouse, or other input device, such as a voice recognition system. As each node in the tree 210 is reached, references to the most relevant documents associated with the node are displayed, and the user is given the option of retrieving one or more of the found documents or viewing references to other, less relevant, documents found to be associated with the topic, or continuing with the search. In a preferred embodiment, the documents associated with offspring or sibling nodes are included in the collection of documents that are considered relevant to the topic. Because the topics are organized in a hierarchical form in a preferred embodiment, as the user progresses down the hierarchy, the range of relevant documents decreases, thereby improving the performance and effectiveness of the search.

Detailed Description Text (17):
Note that the above process provides ancillary advantages that are not available to conventional keyword search engines as well. For example, the presentation of the hierarchical structure provides the user an insight into how documents are organized within the system, and allows the user to adjust his or her search methods accordingly. The presentation also provides immediate feedback to the user as to whether the user's terminology is being suitably recognized by the system. In a preferred embodiment, the term-mapping-services module 340 allows the user to add words and phrases that are associated with the terms used within the system, thereby allowing for a personalized search vocabulary.

Detailed Description Text (18):
In accordance with one aspect of this invention, the query/result-services module 390 enhances the user query by formulating the query as a context-sensitive query, or view. For example, the context of the user may differ according to whether the user is at home or at an office. For example, a search for restaurants may favor business-oriented establishments when a restaurant query is submitted by the user during routine working hours, and family-oriented establishments when the query is submitted at other times. In a preferred embodiment, the query/result-services module 390 also accommodates the use of user preferences to customize the results of a search in dependence upon the particular user's preferences. As in the case of topical extraction, machine learning and other techniques are used in a preferred embodiment to provide a more effective search pattern based on the observed behavior of the user. In a copending application, "Context-Based and User-Profile

Driven Information Retrieval", Ser. No. 09/104,491, filed Jun. 25, 1998 by Chandra Dharap, incorporated by reference herein, a method and apparatus are presented of enabling a user to query a database wherein the query is augmented by a history of the user's prior queries. Using the restaurant example, if a user consistently accesses French-restaurants documents after submitting a restaurant query and consistently ignores fast-food-restaurants documents, the query/result-services module 390 will give more selection weight to documents that contain a French-food topic, and less weight to documents that contain a grilled-food topic. This copending application also allows the entry of other forms of search requests, such as a drawing of a shape or pattern, a tune or rhythm representing a piece of music, and so on. Because of the use of predetermined topics in accordance with this invention, these alternative forms can be customized for each topic. For example, a server that serves a topic of electronic circuits may be customized to accept a circuit diagram as a user query, and processes that diagram to locate a sub-topic that addresses similar circuits. Alternatively, the user could point to a particular component in the circuit diagram and the server would provide a document that lists the vendors for that type of device. These and other topic specific applications will be evident to one of ordinary skill in the art in light of this invention.

Detailed Description Text (19):
In a preferred embodiment, other learning techniques are used to determine an appropriate search path for queries that can have differing meanings. For example, the word "card" could apply to greeting cards, playing cards, credit cards, printed-circuit-board cards, eccentric people, etc. In a preferred embodiment, the query/result-services module 390 chooses a particular topic corresponding to the query word based on a provided user-profile or based on common usage. If, in response to the chosen topic, the user revises the query to locate one of the other topics that could have been chosen in response to the word "card", the query/result-services module 390 will favor the selection of that other topic in response to the user's subsequent use of the word "card" in a query. These and other techniques for enhancing a user query based on experience and the use of predefined topics will be evident to one of ordinary skill in the art in view of this invention disclosure. For example, the multiple potential topics corresponding to a query may be presented to the user for selection, and the user may be provided the option of having the query/result-services module 390 always choose the selected topic in response to a similar query, or to continue to present the choices.

Detailed Description Text (21):
Note that by organizing the documents according to predefined topics and hierarchies, the time and resources required to search and locate documents that are relevant to a user quest are substantially reduced. By organizing the documents by topic, the number of irrelevant documents that are presented in response to the user query is substantially reduced. By providing context-sensitive user-queries that are transformed into the vocabulary used in the predefined topics and hierarchies, the speed with which a user is brought to an appropriate topic node is substantially improved. By dynamically adjusting the topic extraction process and the user query process via machine learning techniques, the effectiveness and efficiency of the information processing device in accordance with this invention is continually improved.

Current US Original Classification (1):
707/103X

Current US Cross Reference Classification (1):
707/10

Current US Cross Reference Classification (2):
707/102

Current US Cross Reference Classification (3):
707/104.1

Current US Cross Reference Classification (4):
707/3

Current US Cross Reference Classification (5):
707/4

Current US Cross Reference Classification (6):
707/5

CLAIMS:

5. The information processing system of claim 4, wherein

the query service device includes a term mapping device that determines the search topic in dependence upon a user query and a user context.

12. The method of claim 11, wherein the step of enabling the determination of the search topic includes the step of

enabling a determination of a user context, and

wherein the determination of the search topic is further dependent upon the user context.